Beams Week in Review

- Limitations in Luminosity
  - Stacking Rate
    - Current suspect for reduction is DRF2 system
  - Tevatron instabilities
    - Proton intensity limited till transverse dampers commissioned
  - Reliability

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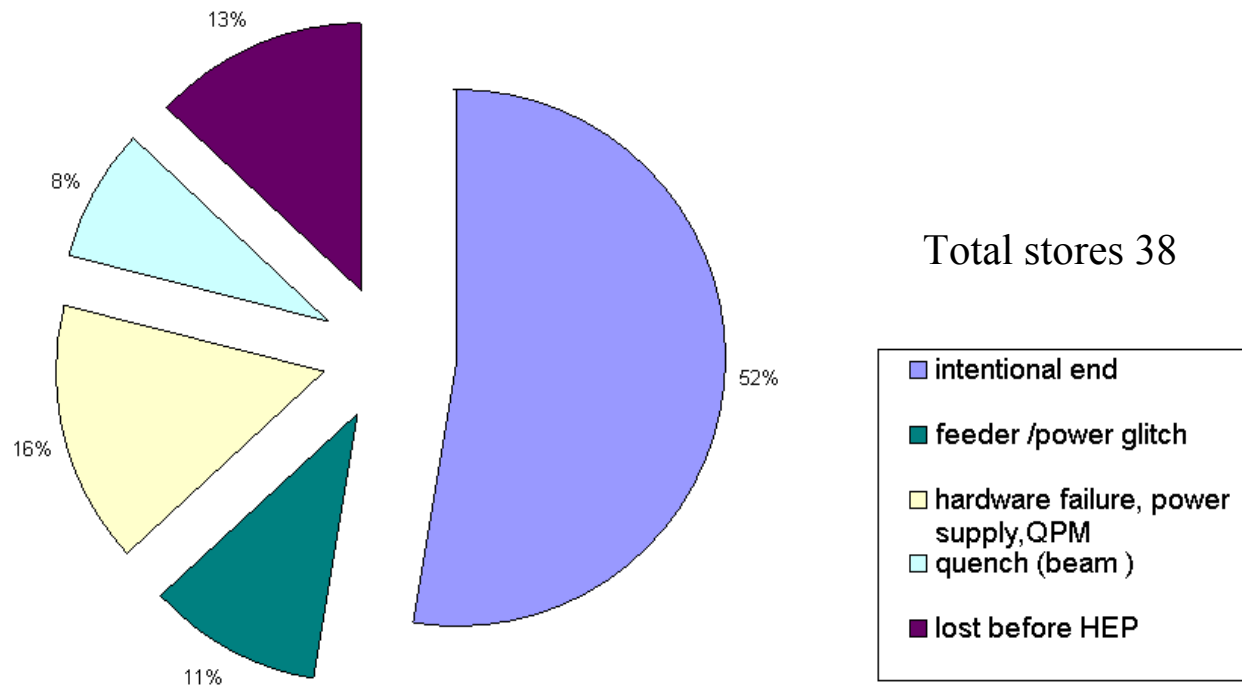
- Rocky Week (8/5 – 8/11)
  - Accelerator Access
  - Accelerator Studies
  - Four Stores
  - Many Problems

Store Termination Since Shutdown

Total stores 38

intentional end

feeder /power glitch

hardware failure, power supply,QPM

quench (beam)

lost before HEP

Beams Week in Review

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Store Summary

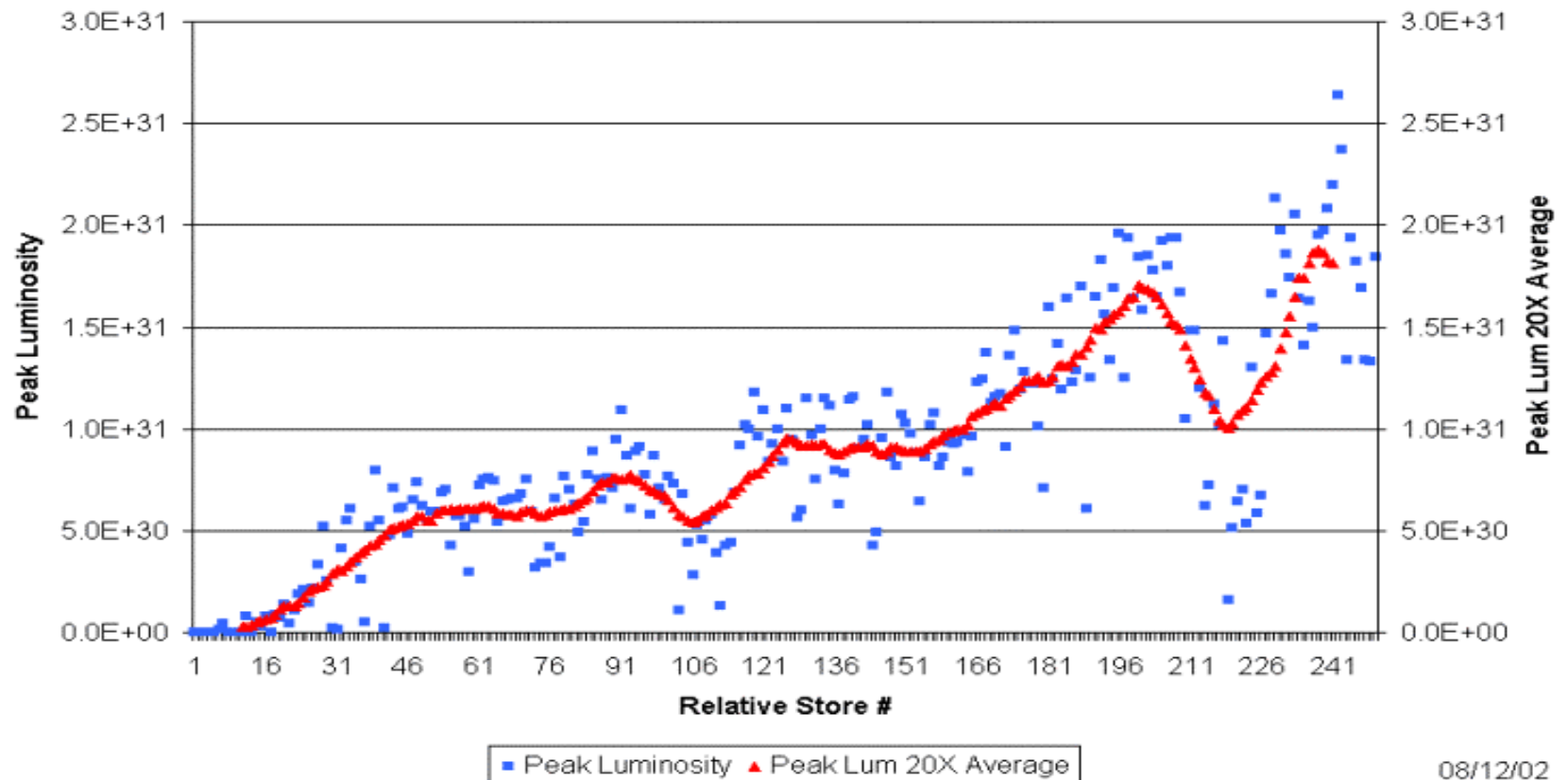| Store #	Initial Luminosity	Duration	Termination	comments
1634	16.9 E30	17.75 hours	Power glitch, killed store and stack	High losses required rescraping
1645	0.0 E30	0.0 hours	Aborted during halo removal	Initial stack 113 mA
1654	13.4 E30	16 hours	intentional	Tunes on squeeze,A1/P1 mods,orbits
1656	13.3 E30	15.2 hours	A4 lead failure	Separator spark on ramp
1657	18.4 E30	23.5 hours	intentional	QC45 spontaneously changed while in store

- Room to Improve
  - Stacking Rate
  - Tevatron Instabilities
  - Rapid turnaround

Collider Run IIA Peak Luminosity

08/12/02

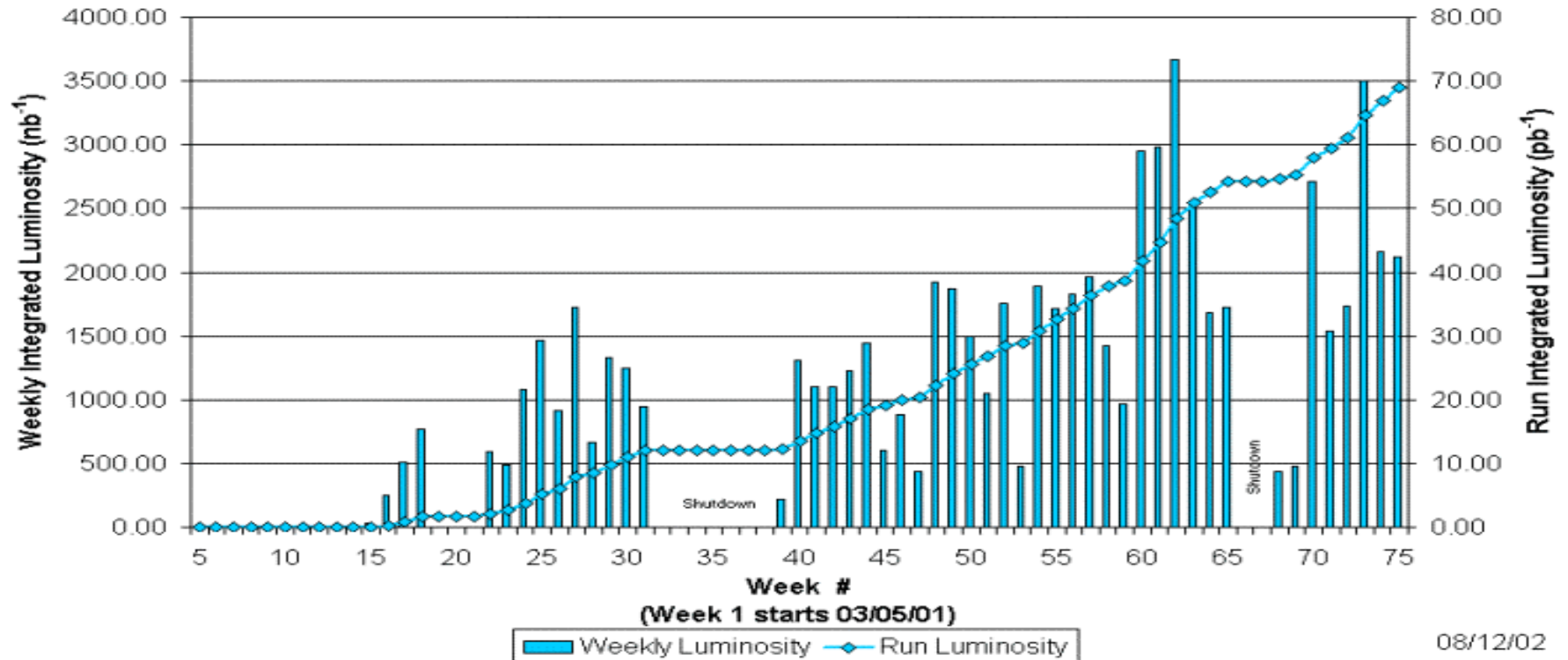# *Integrated Luminosity*

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Collider Run IIA Integrated Luminosity

All Experimenters Meeting

- Studies included
  - TEL beam-beam compensation
  - Orbit smoothing on the ramp and squeeze
  - Adjusted collision orbit through D0
  - Emperical optics matching in Tev injection lines

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All Experimenters Meeting

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All Experimenters Meeting

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- Successfully returned stack from shot lattice to stacking lattice
  - Needs additional work to make completely operational
- Many studies looking at stacking issues
  - Debuncher cooling
  - ARF1 deposition
  - Accumulator stack tail cooling
  - DRF2 (barrier bucket)

- Low Emittance (8 GeV) proton Coalescing
- Pbar feedforward compensation

All Experimenters Meeting

Schedule for this Week

- Start week with 2-4 shift Access
  - CDF repair of COT
  - Replace ion source and ion pump
  - Miscellaneous maintaince
- After ion source/pump replacement complete start up MI/pbar with pbar stacking studies
- After CDF access complete 1 shift Tev damper studies (if ready) followed by Collider operation

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Update 8/12/02 11:33 AM	MONDAY 8/12/02	TUESDAY 8/13/02	WEDNESDAY 8/14/02	THURSDAY 8/15/02	FRIDAY 8/16/02	SATURDAY 8/17/02	SUNDAY 818/02
Owls 0000 to 0800		Tev – CDF Access Linac – Ion Source Repair ? MI/RR – Access ?	Tev – Damper Studies? (1 Shift) Pbar – Stacking to >120mA, Studies?	Stack and store, Studies as necessary to fix stacking	→→→		
DAYS 0800 to 1600	Pbar - Stack @ 100mA Tev – CDF Access (2-4 Shifts) Linac – Source Repair MI – 1300 Access	NTF - PT Tev – CDF Access? Pbar – Studies/Stacking MI/RR – Studies/Stacking	NTF - PT **Shot Setup** **Stack and Store**	Stack and store, Studies as necessary to fix stacking	NTF - PT →→→		
EVES 1600 to 2400	Tev – CDF Access Linac – Source Repair MI/RR – Access	Tev – CDF Access? Pbar – Deb. Cooling Char. MI/RR – Studies/Stacking	Tev – EOS Studies	Stack and store, Studies as necessary to fix stacking	→→→		

Schedule can be found at http://www-bd.fnal.gov/operations/schedules.html